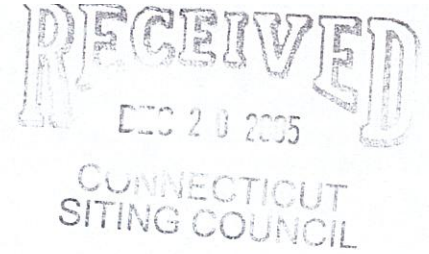


ORIGINAL



TS-T-MOBILE-056-051220

100 Filley Street, Bloomfield, CT 06002
860-692-7118 fax 860-692-7159
Karina.Fournier@t-mobile.com

December 20, 2005

BY HAND

Pamela B. Katz, Chairman and
Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: **Tower Sharing Request by T-Mobile**
30 Higley Road Granby, CT
Latitude: 41 57 57 / Longitude: 72 51 19

Dear Ms. Katz and Members of the Siting Council:

Pursuant to Connecticut General Statutes (C.G.S.) § 16-50aa, Omnipoint Communications, Inc. a.k.a. T-Mobile (formerly Voicestream Wireless Corp.) hereby requests an order from the Connecticut Siting Council ("Council") to approve the proposed shared use of an existing communications tower, located at 30 Higley Road ("West Granby Tower"), in Granby, CT owned by Cingular Wireless. T-Mobile and Cingular have agreed to the shared use of the West Granby Tower, as detailed below.

West Granby Tower

The West Granby Tower facility consists of a one hundred twenty (120) foot high monopole ("Tower") owned and operated by Cingular. T-Mobile proposes to locate antennas at a centerline mounting height of one hundred seven (107) feet. The equipment will be located within a compound at the base of the tower.

West Granby Tower

As shown on the enclosed plans prepared by Coler & Colantonio, including a site plan and tower elevation of the West Granby Tower, annexed hereto as Exhibit 1, T-Mobile proposes a shared use of the Facility by placing antennas on the tower and equipment needed to provide personal communications services ("PCS") within the existing site plan. T-Mobile will install three (3) antennas at the one hundred seven (107) foot level of the Tower. Three (3) associated unmanned equipment cabinets will be located at the base of the tower.

Connecticut General Statutes § 16-50aa provides that, upon written request for shared use approval, an order approving such use shall be issued, "if the council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns." (C.G.S. § 16-50aa(c)(1).) Further, upon approval of such shared use, it is exclusive and no local zoning or land use approvals are required C.G.S. §16-50x. Shared use of the West Granby Tower satisfies the approval criteria set forth in C.G.S. § 16-50aa as follows:

- A. Technical Feasibility The existing Tower and compound were designed to accommodate multiple carriers. A structural analysis of the Tower with the proposed T-Mobile installation has been performed and is attached as Exhibit 2. The structural analysis concludes that the tower can safely accommodate the proposed T-Mobile antennas. The proposed shared use of this Tower is technically feasible. Further there is sufficient room at the base of the facility, thus the site plan will not have to be altered.
- B. Legal Feasibility Pursuant to C.G.S. § 16-50aa, the Council has been authorized to issue an order approving shared use of the existing West Granby Tower. (C.G.S. § 16-50aa (C)(1)). Under the authority vested in the Council by C.G.S. § 16-50aa, an order by the Council approving the shared use of a tower would permit the Applicant to obtain a building permit for the proposed installation.
- C. Environmental Feasibility The proposed shared use would have a minimal environmental effect, for the following reasons:

- 1.) The proposed installation would have a de minimis visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the existing facility,
 - 2.) The proposed installation by T-Mobile would not increase the height of the tower nor expand the site plan at the West Granby Tower and will be of minimal impact to the facility;
 - 3.) The proposed installation would not increase the noise levels at the existing facility boundaries by six decibels or more;
 - 4.) Operation of T-Mobile's antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. The "worst case" exposure calculated for the operation of this facility for T-Mobile would be approximately 4.2% of the standard. See Radio Frequency Memo dated November 17, 2005, prepared by Marlon DePaz, annexed hereto as Exhibit 3.
 - 5.) The proposed shared use of the West Granby Tower will not require any water or sanitary facilities, or generate any air emissions or discharges to water bodies. Further, the installation will not generate any traffic other than for periodic maintenance visits.
- D. Economic Feasibility The Applicant and the tower owner have agreed to share use of the West Granby Tower on terms agreeable to both parties. The proposed tower sharing is therefore economically feasible.
- E. Public Safety As stated above and evidenced in the Radio Frequency Field Survey annexed hereto as Exhibit 3, the operation of T-Mobile's antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. Further, the addition of T-Mobile's telecommunications service in the West Granby area through shared use of the West Granby Tower is expected to enhance the safety and welfare of local residents and travelers through the area resulting in an improvement to public safety in this area.

Conclusion

As delineated above, the proposed shared use of the West Granby Tower satisfies the criteria set forth in C.G.S. § 16-50aa, and advances the General Assembly's and the Siting Council's goal of preventing the proliferation of tower in the State of Connecticut. T-Mobile therefore requests the Siting Council issue an order approving the proposed shared use of the West Granby Tower.

Respectfully submitted,



Karina Fournier
Zoning Dept.
T-Mobile
100 Filley St.
Bloomfield, CT 06002
(860) 692-7118

cc: 1st Selectmen, John Adams

Exhibit 1

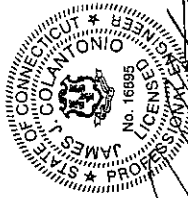
WEST GRANBY_FT

30 HIGLEY ROAD

WEST GRANBY, CT 06090

SITE NUMBER: CTHA-162-A

SITE TYPE: (F) MONOPOLE/CO-LOCATE



EMERGENCY COMMUNICATIONS, INC.
A DIVISION OF
1. HARTLEY, CT, INC.
100 FULLEY STREET
WEST GRANBY, CT 06090
TEL: (860) 333-7200
FAX: (860) 333-7200
NO FULLEY STREET
WEST GRANBY, CT 06090
TEL: (860) 333-7200
FAX: (860) 333-7200

COLER &
COLANTONIO
CONSULTING AND ENGINEERING
25 BEAVER HILL ROAD
WEST GRANBY, CT 06090
(860) 333-7000

APPROVALS

LANDING

REVISION

DATE

BY

FOR

CONSTRUCTION

A/E

PROJECT NO.

17-337

DATE

BY

FOR

CONSTRUCTION

A/E

PROJECT NO.

17-337

DATE

BY

FOR

CONSTRUCTION

A/E

PROJECT NO.

17-337

DATE

BY

FOR

CONSTRUCTION

A/E

PROJECT NO.

17-337

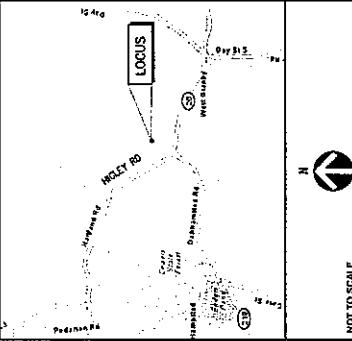
PROJECT SUMMARY

SITE NUMBER: CTHA-162-A
SITE NAME: WEST GRANBY_FT
SITE ADDRESS: 30 HIGLEY ROAD
WEST GRANBY, CT 06090
ASSESSOR'S PARCEL NO.: MAP: F-20 : 86A: 23 : LOT: 59
ZONING DISTRICT: RESIDENTIAL (R2A)
CONSTRUCTION TYPE: (F) MONOPOLE/CO-LOCATE
STRUCTURE OWNER: ENIGMATIC WIRELESS
BOSTON, MA 02114
PROPERTY OWNER: WILLIAM A. JAMES H. PERSE
WEST GRANBY, CT 06090
APPLICANT: EMERGENCY COMMUNICATIONS, INC.
100 FULLEY STREET
WEST GRANBY, CT 06090

SHEET INDEX

SHEET NO.	DESCRIPTION	REV. NO.
1-1	TITLE SHEET	1
A-1	PILOT PLAN, PARTIAL SITE PLAN, ELEVATION & NOTES	1
S-1	STRUCTURAL NOTES, PLANS, SECTIONS & DETAILS	1
E-1	ELECTRICAL & GROUNDING NOTES, RISES & DETAILS	1

VICINITY MAP



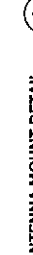
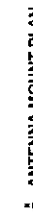
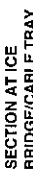
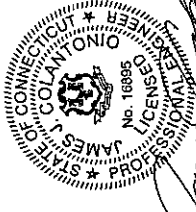
DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN AND DIRECT THE PROJECT ENGINEER TO THE PROJECT SITE TO VERIFY THE PROJECT LOCATION AND EXISTING CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT AGENCIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT AGENCIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT AGENCIES.
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18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT AGENCIES.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT AGENCIES.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT AGENCIES.



[illegible]

IF ASSUMED (E) CONDITION DIFFERS FROM SHOWN,
ENGINEER MUST BE INFORMED OF ACTUAL FIELD CONDITION

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECT THE CONSTRUCTION WORK.

CTHA-162-A

WEST GRANBY_FT

30 HICKLEY ROAD
WEST CRANBY, CT 06090

FBI 1016

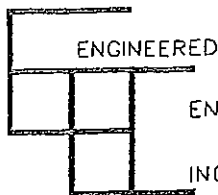
STRUCTURAL NOTES, PLANS,
SECTIONS & DETAILS

DATE RECEIVED

5

Exhibit 2

CTHA 162A



Customer BECHTEL
 Structure 120' MONOPOLE

By M.R. MOREL 1/05/04

Date

Checked 12233

Job/Quote No.

SITE LOCATION: HARTFORD, CT
 SITE NAME: WEST GRAMBY

T-Mobile Site No: CTHA162A

A & E Manager: D.O'Connor

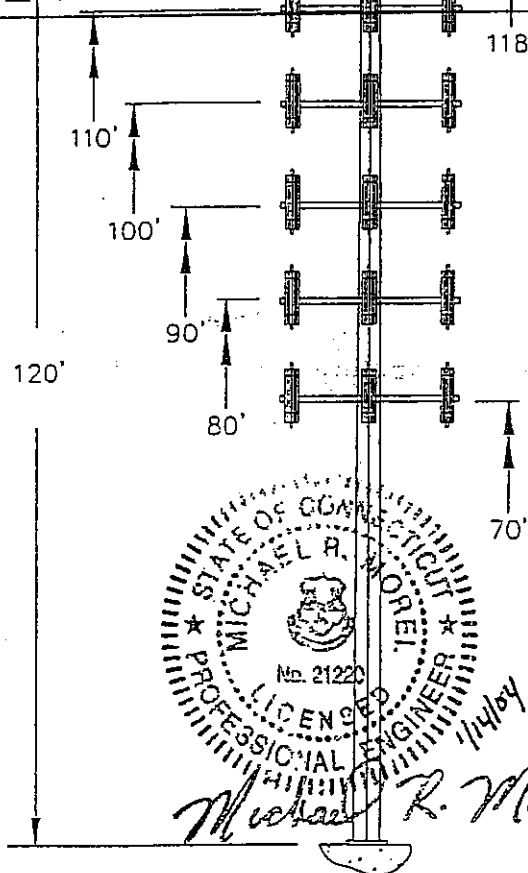
Date: 12/5/05

Antenna Make: EMS Model No.: DR65 DR2

Number Antennas: 9 Rad. Center (AGL): 107 Feet

Coax Cables: Number: 24 ☐ 7/8" ☒ 1-5/8" ☐ 2-1/4"

- ☒ Tower and Foundation Acceptable; No Upgrades Required
☐ Tower Upgrades Required
☐ Foundation Upgrades Required
☐ Special Coax Placement or Bundling Required



ANTENNA LOADING:

- (6) ALLGON 7290 PANEL ANTENNAS @ 120'
 10' UNIVERSAL T-ARM ARRAY @ 118' (CURRENT)
- (9) 4ft² PANEL ANTENNAS
 LOW PROFILE PLATFORM @ 110' (FUTURE)
- (9) 4ft² PANEL ANTENNAS
 LOW PROFILE PLATFORM @ 100' (FUTURE)
- (9) 4ft² PANEL ANTENNAS
 LOW PROFILE PLATFORM @ 90' (FUTURE)
- (9) 4ft² PANEL ANTENNAS
 LOW PROFILE PLATFORM @ 80' (FUTURE)
- (9) 4ft² PANEL ANTENNAS
 LOW PROFILE PLATFORM @ 70' (FUTURE)

MONOPOLE ALSO MEETS THE FOLLOWING CRITERIA:

- (9) ALLGON 7290 PANEL ANTENNAS
 LOW PROFILE PLATFORM @ TOP
- (9) 4ft² PANEL ANTENNAS
 LOW PROFILE PLATFORM @ 110'
- (9) 4ft² PANEL ANTENNAS
 LOW PROFILE PLATFORM @ 100'
- (2) 4ft ϕ MW DISHES - SSP4-52B @ 90'

DESIGN NOTES:

DESIGNED IN ACCORDANCE WITH TIA/EIA 222-F
 80 MPH BASIC WIND SPEED (FASTEST MILE)

CASE I - 80 MPH FASTEST MILE WIND SPEED

CASE II - 75% WIND LOAD AT 80 MPH & 1/2" ICE

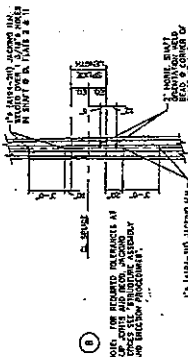
NOTE: IT IS THE RESPONSIBILITY
 OF THE PURCHASER TO VERIFY
 THAT THE WIND LOADS AND DESIGN
 CRITERIA SPECIFIED MEET THE REQUIREMENTS
 OF ALL LOCAL BUILDING CODES

[illegible]

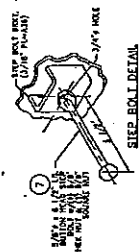
TOTAL GALV. STR. & ACCES. WT.	6
TOTAL ANCHOR BOLT & TEMPLATE WT.	1779.25

GENERAL NOTES:

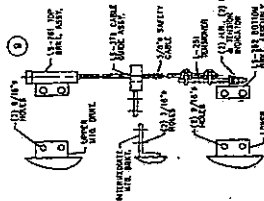
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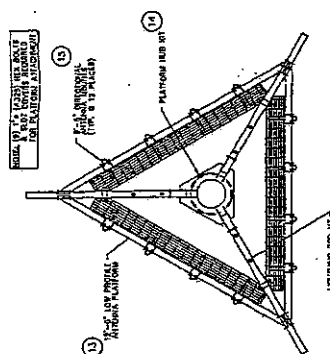
SLIP :JOINT JACKING
PROVISION DETAIL.



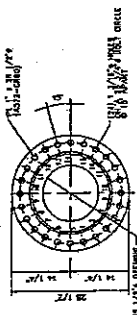
STEP BOLT DETAIL



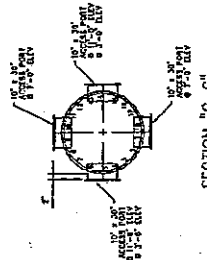
SAFETY CLUB ATTACHMENT DETAILS



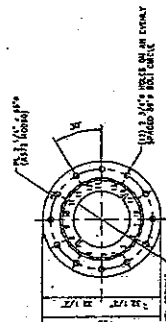
VIEW "A-A"



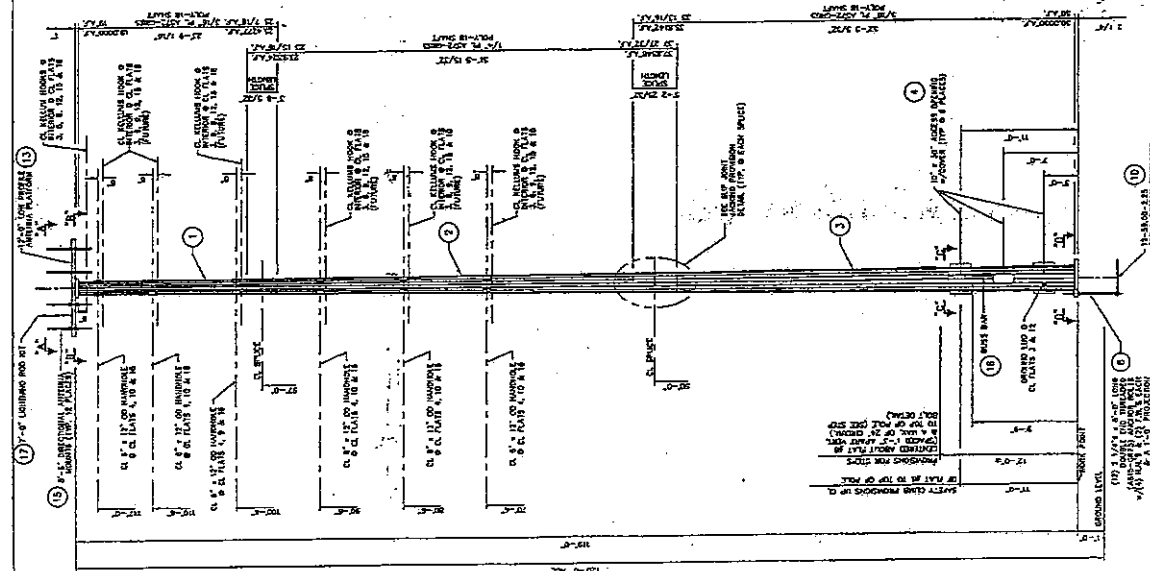
VIEW "B-B"



SECTION "C-C"



SECTION "D-D"



UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE
TAKEN FROM THE BOTTOM OF THE BASE PLATE.

ASSEMBLY MARKING PROCEDURE

THIS MESSAGE IS CONFIDENTIAL AND MAY NOT BE
LOANED, REPRODUCED, COPIED EITHER WHOLLY OR IN
PART, OR MADE PUBLIC IN ANY MANNER WITHOUT THE
WRITTEN CONSENT OF ENGINEERED ENDORSEMENT INC.-ALL



Michael R. Mora

[illegible]

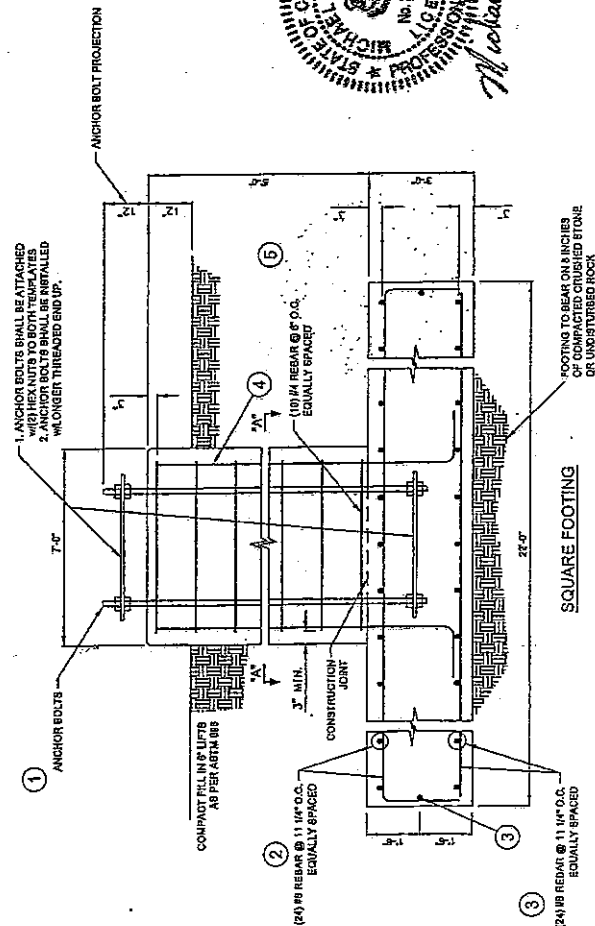
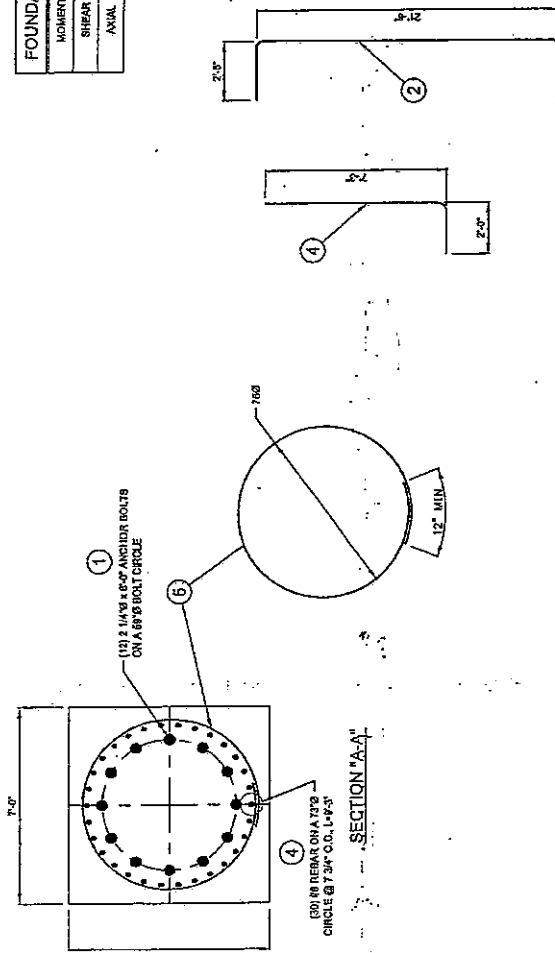
MATERIAL LIST		DESCRIPTION
ITEM	QTY.	
1	12	2 1/4" X 5/8" AN16-GR75/16 ANCHOR BOLTS
2	48	40 REBAR 12 #6 9' (ASTM A515-GR60)
3	62	40 REBAR 12 #6 9' (ASTM A515-GR60)
4	43	40 REBAR 12 #6 9' (ASTM A515-GR60)
5	10	24 REBAR 21 #5 9' (ASTM A515-GR60)

VOL. CONCRETE @ 1000 psi (TYPE II CEMENT)	62.9 yd ³
STEEL (ASTM A615-GR.60)	3771.0 lbs

1. FOUNDATION DESIGN IS BASED ON THE FOLLOWING: EEL JOB# 12233, DRAWING# 0854669
SOIL REPORT BY JAWOREN GEOTECH, INC. REPORT NO. 07380 - 01-06-04

2. FOUNDATION EMBEDMENT IS BLOWN FROM THE GROUND LEVEL AT THE TIME OF SOIL INVESTIGATION
AS SHOWN IN THE SOIL REPORT. SHOULD THE ACTUAL SOIL CONDITIONS DIFFER FROM THOSE
IN THE REPORT, THE GEOTECHNICAL ENGINEER AND FOUNDATION DESIGNER SHOULD BE NOTIFIED
IN ORDER TO RE-EVALUATE THE FOUNDATION DESIGN.

- [illegible]



John D. Gray

**ENGINEERED
ENDEAVORS
INCORPORATED**
The Experienced Aesthete of View

EEI

7510 Wether Drive • Mentor, OH 44060-4872
Ph: (440) 918-1101 • Ph: (988) 270-3855
Fax: (440) 918-1105 • www.eendi.com

NATCOMM/CINGULAR
120'-0" MONOPOLE
WEST GRANBY
HARTFORD COUNTY, CT

0	COMPLETED DRAWING	01/10/81	11/11	SCALE: N.T.B.	PROJECT NO.	12233
SHEET 1 of 1			DRAWING NO.			
12233-35-120.0						

Engineered Endeavors Inc.

7610 Jenther Drive
Mentor, Ohio 44060
Tel (440) 918-1101 Fax (440) 918-1108

Communications Structure Nonlinear Analysis and Design Program

16:03:16 07-28-2005
Revision 1.3 - 1/22/01
Engineer: ngu

Customer NATCOMM/CINGULAR
Job Name 12233-120
Structure 120' MONOPOLE
Location HARTFORD COUNTY, CT
Site WEST GRANBY

OD BOT	OD TOP	NUM. SIDES	THICK INCH	TAPER IN/FT	LENGTH FT	JOINT INCH	JOINT TYPE	YIELD KSI	WEIGHT LBS	JOINT HEIGHT
25.45	19.00	18	0.1875	0.270	23.88	45.00	SLIP	65.0	1052.	97.00
37.84	23.93	18	0.2500	0.270	51.50	63.00	SLIP	65.0	4208.	50.00
50.00	35.79	18	0.3125	0.270	52.63	0.00	BASEPL	65.0	7472.	0.00
TOTAL TUBE WEIGHT								12732.	POUNDS	
POLE SHAFT LENGTH								119.00	FEET	

E = 29600.0 KSI
UNIT WGT = 0.283 LBS/CU IN
AISC constants are used for stress reductions.
TUBE SECTIONS HAVE 18 SIDES AND ARE TREATED AS ROUND
Internal bend radius = 3 X T
Tube diameters are measured flat to flat.
Tube diameters are increased by 1.020 for wind across points.
Drag coefficients are increase by 1.300 for steps on the pole.
AISC Tube Shape Coefficient of 1.000 is applied.
ORIGINAL DATA FILE NAME T:\ENG5\JOBS12\12233120
REVISED DATA FILE NAME T:\ENG5\JOBS12\12233120

APPURTENANCES

DESCRIPTION	NUM.	ELEV.	Kz	AREA	WGT	Ca	AREA	WGT	Ca	FACTOR
				< WITHOUT ICE >			< WITH ICE >			
7770.00	12	119.	1.443	4.20	35.	1.4000	4.67	68.	1.4000	0.93
LOW PROF. PLATF.	1	119.	1.443	7.50	2100.	2.0000	9.00	3250.	2.0000	1.00
7770.00	12	109.	1.407	4.20	35.	1.4000	4.67	68.	1.4000	0.93
LOW PROF. PLATF.	1	109.	1.407	7.50	2100.	2.0000	9.00	3250.	2.0000	1.00
7770.00	12	99.	1.369	4.20	35.	1.4000	4.67	68.	1.4000	0.93
LOW PROF. PLATF.	1	99.	1.369	7.50	2100.	2.0000	9.00	3250.	2.0000	1.00
7770.00	12	89.	1.328	4.20	35.	1.4000	4.67	68.	1.4000	0.93
LOW PROF. PLATF.	1	89.	1.328	7.50	2100.	2.0000	9.00	3250.	2.0000	1.00
7770.00	12	79.	1.283	4.20	35.	1.4000	4.67	68.	1.4000	0.93
LOW PROF. PLATF.	1	79.	1.283	7.50	2100.	2.0000	9.00	3250.	2.0000	1.00
7770.00	12	69.	1.235	4.20	35.	1.4000	4.67	68.	1.4000	0.93
LOW PROF. PLATF.	1	69.	1.235	7.50	2100.	2.0000	9.00	3250.	2.0000	1.00

LOAD CASE 1

BASIC LOADING

DEAD LOAD FACTOR 1.00 WIND PSF REDUCTION 1.00 RADIAL ICE 0.00 IN.

WIND VELOCITY 80 BOTTOM 16.52 PSF TOP 23.54 PSF
MAX BASE ROTATION 0.00 DEG

APPLIED APPURTENANCE FORCES

	ELEVATION FT	WEIGHT KIPS	WIND KIPS
7770.00	119.00	0.420	2.621
LOW PROF. PLATF.	119.00	2.100	0.599
7770.00	109.00	0.420	2.556
LOW PROF. PLATF.	109.00	2.100	0.584
7770.00	99.00	0.420	2.487
LOW PROF. PLATF.	99.00	2.100	0.568
7770.00	89.00	0.420	2.412
LOW PROF. PLATF.	89.00	2.100	0.551
7770.00	79.00	0.420	2.332
LOW PROF. PLATF.	79.00	2.100	0.533
7770.00	69.00	0.420	2.243
LOW PROF. PLATF.	69.00	2.100	0.513

TUBE PROPERTIES			MEMBER FORCES			STRESSES		STRESS RATIOS	TOTAL		
ELEV FT	DIAM IN	WALL IN	SHEAR K	BENDING K-FT	AXIAL K	AXIAL KSI	BEND. KSI		ALLOW KSI	DEFL IN	TILT DEG
119.00	19.00	0.1875	3.63	0.01	2.44	0.22	0.00	50.60	0.00	64.2	4.61
109.00	21.70	0.1875	3.63	36.15	2.44	0.19	6.42	48.83	0.13	54.7	4.53
99.00	24.40	0.1875	7.40	109.90	5.12	0.36	15.39	47.45	0.33	45.4	4.30
97.00	24.94	0.1875	10.90	131.64	7.69	0.53	17.64	47.21	0.38	43.6	4.24
TYPE OF JOINT: SLIP JOINT											
97.00	24.44	0.2500	11.18	131.66	8.26	0.43	13.89	51.12	0.28	43.6	4.24
89.00	26.60	0.2500	11.18	220.84	8.26	0.40	19.62	49.92	0.40	36.8	4.00
79.00	29.30	0.2500	14.74	367.88	11.25	0.49	26.87	48.68	0.56	28.8	3.61
69.00	32.00	0.2500	18.23	549.83	14.45	0.58	33.60	47.64	0.72	21.7	3.15
59.00	34.70	0.2500	21.57	765.23	17.81	0.66	39.70	46.76	0.86	15.6	2.65
50.00	37.13	0.2500	21.99	962.92	18.85	0.65	43.57	46.08	0.96	11.1	2.16
TYPE OF JOINT: SLIP JOINT											
50.00	36.50	0.3125	22.43	962.92	20.69	0.58	36.25	48.72	0.76	11.1	2.16
40.00	39.20	0.3125	22.43	1187.08	20.69	0.54	38.68	47.87	0.82	7.0	1.71
30.00	41.90	0.3125	22.87	1415.73	22.76	0.56	40.32	47.13	0.87	3.9	1.26
20.00	44.60	0.3125	23.30	1648.73	24.15	0.56	41.39	46.48	0.90	1.7	0.82
10.00	47.30	0.3125	23.75	1886.25	25.64	0.56	42.05	45.90	0.93	0.4	0.40
0.00	50.00	0.3125	24.56	2128.51	28.02	0.57	42.42	45.39	0.95	0.0	0.00

REACTION COMPONENTS (KIPS AND FT-KIPS)

TRANSVERSE SHEAR	VERTICAL FORCE	WIND SHEAR	MOMENT ABOUT TRANSVERSE	MOMENT ABOUT VERTICAL	MOMENT ABOUT WIND AXIS
0.000	28.023	-24.561	2128.511	0.000	0.000

LOAD CASE 2

BASIC LOADING PLUS ICE

DEAD LOAD FACTOR 1.00 WIND PSF REDUCTION 0.75 RADIAL ICE 0.50 IN.

WIND VELOCITY 80 BOTTOM 12.39 PSF TOP 17.66 PSF
MAX BASE ROTATION 0.00 DEG

APPLIED APPURTENANCE FORCES

	ELEVATION FT	WEIGHT KIPS	WIND KIPS
7770.00	119.00	0.811	2.186
LOW PROF. PLATF.	119.00	3.250	0.539
7770.00	109.00	0.811	2.132
LOW PROF. PLATF.	109.00	3.250	0.526
7770.00	99.00	0.811	2.074
LOW PROF. PLATF.	99.00	3.250	0.512
7770.00	89.00	0.811	2.012
LOW PROF. PLATF.	89.00	3.250	0.496
7770.00	79.00	0.811	1.944
LOW PROF. PLATF.	79.00	3.250	0.480
7770.00	69.00	0.811	1.871
LOW PROF. PLATF.	69.00	3.250	0.461

TUBE PROPERTIES			MEMBER FORCES			STRESSES			STRESS	TOTAL	
ELEV	DIAM	WALL	SHEAR	BENDING	AXIAL	AXIAL	BEND.	ALLOW	RATIOS	DEFL	TILT
FT	IN	IN	K	K-FT	K	KSI	KSI	KSI		IN	DEG
119.00	19.00	0.1875	3.17	0.00	4.06	0.37	0.00	50.60	0.00	55.1	3.97
109.00	21.70	0.1875	3.17	31.60	4.06	0.32	5.61	48.83	0.12	46.9	3.90
99.00	24.40	0.1875	6.44	95.84	8.35	0.59	13.42	47.45	0.29	38.9	3.70
97.00	24.94	0.1875	9.49	114.78	12.52	0.86	15.38	47.21	0.34	37.4	3.65
TYPE OF JOINT: SLIP JOINT											
97.00	24.44	0.2500	9.68	114.75	13.09	0.69	12.11	51.12	0.25	37.4	3.65
89.00	26.60	0.2500	9.68	192.01	13.09	0.63	17.06	49.92	0.35	31.5	3.43
79.00	29.30	0.2500	12.73	319.10	17.67	0.77	23.31	48.68	0.49	24.6	3.10
69.00	32.00	0.2500	15.68	475.73	22.44	0.90	29.07	47.64	0.63	18.6	2.70
59.00	34.70	0.2500	18.48	660.40	27.35	1.01	34.26	46.76	0.75	13.3	2.26
50.00	37.13	0.2500	18.72	828.77	28.35	0.98	37.50	46.08	0.83	9.5	1.85
TYPE OF JOINT: SLIP JOINT											
50.00	36.50	0.3125	18.99	828.77	30.70	0.86	31.20	48.72	0.66	9.5	1.85
40.00	39.20	0.3125	18.99	1018.62	30.70	0.80	33.19	47.87	0.71	6.0	1.46
30.00	41.90	0.3125	19.51	1211.10	33.40	0.82	34.49	47.13	0.75	3.3	1.07
20.00	44.60	0.3125	19.78	1406.15	34.88	0.80	35.30	46.48	0.77	1.5	0.70
10.00	47.30	0.3125	20.07	1603.94	36.46	0.79	35.75	45.90	0.79	0.4	0.34
0.00	50.00	0.3125	20.33	1804.64	37.27	0.76	35.96	45.39	0.81	0.0	0.00

REACTION COMPONENTS (KIPS AND FT-KIPS)

TRANSVERSE	VERTICAL	WIND	MOMENT ABOUT	MOMENT ABOUT	MOMENT ABOUT
SHEAR	FORCE	SHEAR	TRANSVERSE	VERTICAL	WIND AXIS
0.000	37.270	-20.327	1804.637	0.000	0.000

SUMMARY TABLE

ELEV	STRESS RATIO	AXIAL	BENDING	LOADING
119.00	0.01	4.06	0.0	2 BASIC LOADING PLUS ICE
109.00	0.13	2.44	36.1	1 BASIC LOADING
99.00	0.33	5.12	109.9	1 BASIC LOADING
97.00	0.38	7.69	131.6	1 BASIC LOADING
89.00	0.40	8.26	220.8	1 BASIC LOADING
79.00	0.56	11.25	367.9	1 BASIC LOADING
69.00	0.72	14.45	549.8	1 BASIC LOADING
59.00	0.86	17.81	765.2	1 BASIC LOADING
50.00	0.96	18.85	962.9	1 BASIC LOADING
40.00	0.82	20.69	1187.1	1 BASIC LOADING
30.00	0.87	22.76	1415.7	1 BASIC LOADING
20.00	0.90	24.15	1648.7	1 BASIC LOADING
10.00	0.93	25.64	1886.3	1 BASIC LOADING
0.00	0.95	28.02	2128.5	1 BASIC LOADING

MAXIMUM SUPPORT MOMENT K-FT	2128.51
CORRESPONDING AXIAL FORCE KIPS	28.02
CORRESPONDING SHEAR FORCE KIPS	24.56

BASE PLATE AT ELEVATION 0.00 FEET

TUBE DIAMETER 50.00 INCHES

DESIGN MOMENT 2128.5 KIP FT

DESIGN MOMENT IS 0. DEGREES FROM THE WIND DIRECTION

BOLTS ARE ON THE KNUCKLES OF THE TUBE

APPLIED AXIAL FORCE 28.0 KIPS

APPLIED SHEAR 24.56 KIPS

* BOLT DATA

BOLT TYPE A615 GR75

BOLTS ARE EVENLY SPACED

DIAMETER 2.250 INCHES

EFFECTIVE AREA 3.250 SQ IN

TOTAL LENGTH 8.0 FEET

End plates are required.

MINIMUM EMBEDMENT -7.0 FEET

NUMBER OF BOLTS 12

BOLT CIRCLE DIAMETER 59.00 INCHES

ALLOWABLE STRESS 60.0 KSI

APPLIED AXIAL STRESS 45.1 KSI

MAX BOLT FORCE 146.6 KIPS

BOLT BENDING STRESS 3.0 KSI

COMBINED BOLT STRESS 48.1 KSI

CLEARANCE UNDER PLATE 3.25 INCHES

BOLT WEIGHT 1353.6 POUNDS

PLATE DATA

DIAMETER OF PLATE 65.00 INCHES

MATERIAL A572 GR60

PROVIDED THICKNESS 2.250 INCHES

REQUIRED THICKNESS 1.474 INCHES

BOLT HOLE DIAMETER 2.625 INCHES

CENTER HOLE SIZE 40.00 INCHES

NET WEIGHT 1271.4 POUNDS

RAW STOCK WEIGHT 2690.3 POUNDS

SURFACE AREA 27.73 SQ FT

ALLOWABLE STRESS 59.99 KSI

MAX APPLIED STRESS 25.76 KSI

CONCRETE STRENGTH 3000. PSI

Base Plate - use 65.00 inch ROUND x 2.250 inch A572 GR60
with (12) 2.250 diameter x 8.00 foot caged A615 GR75 bolts
on a 59.00 inch bolt circle. End plates are required.

Exhibit 3

Technical Memo

To: Karina Fournier
From: Marlon DePaz - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CTHA162A
Date: November 17, 2005

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a New Monopole at 30 Higley Rd, West Granby, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

- 1) The emissions from T-Mobile transmitters are in the 1935-1945 MHz frequency band.
- 2) The antenna array consists of three sectors, with 0 antennas per sector.
- 3) The model number for each antenna is APX16PV-16PV-2.
- 4) The antenna center line height is 107 ft.
- 5) The maximum transmit power from any sector is 1964.81 Watts Effective Radiated Power (EIRP) assuming 8 channels per sector.
- 6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
- 7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile PCS antenna installation on a New Monopole at 30 Higley Rd, West Granby, CT, is 0.04226 mW/cm². This value represents 4.226% of the Maximum Permissible Exposure (MPE) standard of 1 milliwatt per square centimeter (mW/cm²) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.

The combined Power Density from other carriers is 7.49%. The combined Power Density for the site is 11.716% of the M.P.E. standard.

New England Market

Connecticut

Worst Case Power Density



Site:	CTHA162A
Site Address:	30 Higley Rd
Town:	West Granby
Tower Height:	120 ft.
Tower Style:	New Monopole
Base Station TX output	20 W
Number of channels	8
Antenna Model	APX16PV-16PV-2
Cable Size	1 5/8 in.
Cable Length	130 ft.
Antenna Height	107.0 ft.
Ground Reflection	1.6
Frequency	1935.0 MHz
Jumper & Connector loss	4.50 dB
Antenna Gain	16.9 dBi
Cable Loss per foot	0.0116 dB
Total Cable Loss	1.5080 dB
Total Attenuation	6.0080 dB
Total EIRP per Channel	53.90 dBm
(In Watts)	245.60 W
Total EIRP per Sector	62.93 dBm
(In Watts)	1964.81 W
nsg	10.8920
Power Density (S) =	0.042257 mW/cm^2
T-Mobile Worst Case % MPE =	4.2257%
Equation Used : $S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4 \pi (R)^2}$	

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Co-Location Total

Carrier	% of Standard
Verizon	
Cingular	
Sprint PCS	
AT&T Wireless	7.4900 %
Nextel	
Total Excluding T-Mobile	7.4900 %
T-Mobile	4.2257
Total % MPE for Site	11.7157%